

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

FREE SPEECH COALITION, INC. et al.,)
) Civil Action No. 2:09-4607
)
Plaintiffs,) Judge Michael M. Baylson
)
v.)
) DEFENDANT'S
THE HONORABLE ERIC H. HOLDER, JR.,) MEMORANDUM IN SUPPORT
) OF MOTION TO
Attorney General,) EXCLUDE TESTIMONY OF
) MICHELLE DROUIN, MARC
Defendant.) ZIMMERMAN, AND DANIEL
) LINZ
)
_____)

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INTRODUCTION

Plaintiffs contend that two federal statutes, 18 U.S.C. §§ 2257 and 2257A – which impose age verification and recordkeeping requirements on producers of depictions of sexually explicit conduct – should be struck down as facially invalid under the First Amendment’s overbreadth doctrine. Plaintiffs have now moved for summary judgment on this overbreadth claim, and have attached reports of three purported experts in an effort to establish the existence of a “substantial” amount of depictions of sexually explicit conduct that should not be subject to the 2257 requirements. Under the well-established standards governing expert witnesses, the testimony of all three of plaintiffs’ experts should be excluded.

Plaintiffs bear the heavy burden of establishing that a “substantial number” of applications of the 2257 requirements are “unconstitutional, judged in relation to the statute[s]’ plainly legitimate sweep.” *FSC v. Attorney Gen.*, 677 F.3d 519, 537 (3d Cir. 2012) (internal quotation omitted). The Third Circuit remanded plaintiffs’ overbreadth

claim in order to afford plaintiffs the opportunity to develop the record on this question. *Id.* at 537-38. In particular, the Third Circuit held that plaintiffs should be allowed to develop the record with respect to their assertion that a “‘vast quantity’ of protected sexually explicit depictions include performers who are ‘clearly mature adults’ that ‘could not be mistaken for children.’” *Id.* at 538. The Third Circuit also held that plaintiffs “should be permitted to develop the record as to whether the Statutes are unconstitutionally overbroad based on their purported regulation of purely private conduct” specifically, “private, noncommercial depictions created and viewed by adults in their homes.” *Id.*

Plaintiffs offer the report of Dr. Daniel Linz, who purports to offer opinions regarding the quantity of various categories of sexually explicit depictions. Linz, however, is not qualified to offer such testimony. His research has focused on the effects of sexually oriented entertainment on adults and communities, and his prior expert testimony in other cases has focused exclusively on the adverse secondary effects of adult clubs in the neighborhoods where they operate. This background does not qualify him to offer an opinion on the prevalence of sexually explicit depictions on the Internet or transmitted through various social media or technological devices. Even if it does, the methodologies that Linz describes and employs in his report are not reliable. Linz’s opinions do not flow from research he has conducted independent of this litigation. Instead, Linz draws conclusions from Google search results that are not likely to yield an accurate and reliable count of different types of sexually explicit depictions. Linz also purports to use a method of measuring “regulatory efficiency” that he has no experience in applying and that has in fact never been applied in any similar context, and without the

data necessary to apply this method reliably. Linz also cites outdated, pre-Internet reports to offer opinions about the nature, production, and transmission of child pornography that are unreliable and irrelevant to an understanding of post-Internet child pornography. In addition, Linz's opinions regarding the quantity of "private" sexually explicit depictions are pure speculation as he has not conducted any kind of reliable analysis to formulate them. Because Linz's proffered opinions do not meet the standard for expert testimony, they should be excluded.

Plaintiffs have also identified two additional purported experts—Dr. Michelle Drouin and Dr. Marc Zimmerman—whose testimony would focus specifically on the occurrence of "sexting." These individuals should similarly be precluded from offering expert testimony in this case. For one thing, to the extent that the studies cited by Drouin and Zimmerman provide some indication of the quantity of text messages with sexual content, those numbers have no relevance to this case because none of those studies limited their analyses to depictions of sexually explicit conduct, as defined in 18 U.S.C. §§ 2257 and 2257A. Nothing in these studies provides any information about the quantity of electronic messages that contain depictions of sexual intercourse, bestiality, sadistic or masochistic abuse, or lascivious exhibition of genitals—the only depictions that could conceivably be covered by the 2257 requirements—nor do they indicate how many messages might qualify as "private," in that they were limited to depictions of individuals involved in an intimate relationship, who were sharing those depictions only with each other. The testimony Drouin and Zimmerman would therefore provide no assistance on any inquiry properly before the Court and should thus also be excluded.

In addition, both Drouin's and Zimmerman's conclusions that a certain percentage of all young adults in the country engage in sexting is not based on any reliable methodology. Drouin, furthermore, does not have any training or experience that qualifies her to offer opinions on the prevalence of sexting. Rather, her research focuses on how sexting affects relationships for those who do engage in it. The estimate contained in her expert report is also the only estimate she has ever made about the prevalence of a behavior on a national scale and is unfounded and unreliable.

LEGAL FRAMEWORK

Federal Rule of Evidence 702 provides that only persons qualified as experts "by knowledge, skill, experience, training, or education may testify in the form of an opinion." Fed. R. Evid. 702. Expert opinion testimony is permitted only where the following conditions are met:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

Id. The Court's role is to serve as the "gatekeeper to ensure that the expert's opinion is based on the methods and procedures of science rather than on subjective belief or unsupported speculation." *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254, 290 (3d Cir. 2012) (citation and internal brackets and quotation marks omitted).

The Third Circuit considers three issues when assessing the admissibility of an expert's opinion.¹ First, the witness must be qualified as an expert based on his or her "knowledge, skills, and training." *Pineda v. Ford Motor Co.*, 520 F.3d 237, 244 (3d Cir. 2008) (citation omitted). Although a proffered expert need not be the "best qualified" person in his or her field, *Holbrook v. Lykes Bros. S.S. Co.*, 80 F.3d 777, 782 (3d Cir. 1996), he or she must "possess specialized expertise," *Schneider ex rel. Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir. 2003).

The second inquiry is to determine whether the expert's testimony is reliable. As the Supreme Court has explained, to be reliable an expert opinion "must be derived by the scientific method" and "supported by appropriate validation—*i.e.*, 'good grounds.'" *Daubert v. Merrill Dow Pharm.*, 509 U.S. 579, 590 (1993). Opinion evidence must be connected to the underlying data by more than just the "*ipse dixit* of the expert," and a court may exclude expert testimony if "there is simply too great an analytical gap between the data and the opinion proffered." *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997). Among the factors a court may consider when evaluating the reliability of an expert's methodology are:

- (1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put.

¹ Although the language of Rule 702 was amended in 2011, subsequent to the issuance of most of the relevant opinions from the Supreme Court and Third Circuit on the admissibility of expert opinion testimony, the Advisory Committee Notes make clear that those amendments were designed to be "stylistic only" and "do not change any result in any ruling on evidence admissibility." Fed. R. Evid. 702 advisory committee's note (2011 Amendments).

Pineda, 520 F.3d at 247-48.

The third and final inquiry—whether the expert testimony would assist the trier of fact—“goes primarily to relevance.” *Lauria v. Amtrak*, 145 F.3d 593, 599 (3d Cir. 1998) (quoting *Daubert*, 509 U.S. at 591), *superseded by statute on other grounds*, Fed. R. Evid. 701, *as recognized in Collins v. Prud. Inv. and Ret. Servs.*, 119 F. App’x 371, 379 (3d Cir. 2005). An expert’s testimony must sufficiently “fit” under the facts of the case so that it will “help the trier of fact to understand the evidence or to determine a fact in issue.” Fed. R. Evid. 702(a). *See also Daubert*, 509 U.S. at 591-92 (“Rule 702’s ‘helpfulness’ standard requires a valid scientific connection to the pertinent inquiry as a precondition to admissibility.”).

Although the standard is a flexible one, *see Daubert*, 509 U.S. at 594, the overarching purpose of the 702 inquiry is “to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field,” *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999). Plaintiffs, as the party proposing to introduce the challenged expert opinion testimony, bear “the burden of establishing that the pertinent admissibility requirements are met by a preponderance of the evidence.” Fed. R. Evid. 702 advisory committee’s note (2000 Amendments).

ARGUMENT

I. The Proffered Testimony Of Daniel Linz Is Inadmissible.

Daniel Linz is a professor in the Department of Communications at the University of California, Santa Barbara. Report of Daniel Linz, PhD (“Linz Rpt.”) at 1 ¶ 1 (attached as Linz Exhibit 1). He received a Ph.D. in psychology from the University of Wisconsin,

Madison. *Id.* His “research focus has been on the effects of sexually oriented and violent entertainment upon human psychology and behavior and the effects of sexually related expression on adults and communities.” *Id.* He has offered expert testimony in other cases on the “alleged secondary effects from adult entertainment.” *Id.*

Plaintiffs intend Linz to offer expert testimony on the following issues: (1) the quantity of sexually explicit expression depicting adults vs. the quantity of child pornography; (2) the quantity of child pornography that depicts older adolescents; (3) the quantity of sexually explicit expression depicting persons who are obviously adults vs. the quantity of sexually explicit expression depicting persons who are not obviously adults; (4) whether pedophiles are interested in depictions of pre-pubescent children or teen agers; and (5) the quantity of private non-commercial sexually explicit expression. Linz Rpt. at 2 ¶ 4.² Linz has never before been asked to offer expert testimony on any of these issues. Linz Dep. Tr. 184: 9-19 (attached as Linz Exhibit 2).

Linz’s proposed testimony should be excluded because he is not qualified to offer expert opinion on these issues, he does not employ reliable methodologies nor reliably considers sufficient data, and his testimony would not assist the Court in determining facts relevant to any issue in this case.

A. Linz Is Not Qualified To Offer Expert Testimony On The Issues Identified in His Report

The issues on which Linz purports to offer expert testimony are beyond the “confines of [his] subject area” of expertise. *Ralston v. Smith & Nephew Richards, Inc.*,

² For purposes of this motion, defendant assumes that these inquiries have some relevance to the issue of overbreadth in this case. However, outside the context of this motion, defendant does not concede that the assumptions underlying these inquiries – for example, that the 2257 requirements are valid only as applied to child pornography or “teen porn” – are in any way valid.

275 F.3d 965, 970 (10th Cir. 2001). Linz’s research focus has been *on the effects* of adult entertainment on individuals and communities, Linz Rpt. at 1 ¶ 1 (emphasis added), not on the quantity of child and teen pornography available online or the quantity of private, non-commercial sexually-explicit expression. Linz has not previously conducted research on the proportion of young and youthful-looking individuals on the Internet, Linz Dep. Tr. 35:1-5, nor on the quantity of sexually explicit expression depicting adults versus the quantity of child pornography, *id.* at 63:6-25.³ He also has not conducted research or published on the quantity of private, non-commercial sexually-explicit expression. *Id.* at 159:11—160:1. Linz did publish a chapter about the “current state of research social sciences on child pornography” in 2001. *Id.* at 35:17—36:2. Since then, however, Linz has not conducted any research about how child pornography is distributed, nor has he published peer-reviewed publications on the distribution of child pornography. *Id.* at 37:25—38:14. Nor has Linz conducted his own studies about the proportion of child pornography that is commercially produced. Dep. Tr. at 69:14-19. Linz also has not conducted “any research personally on peer-to-peer networks.” Dep. Tr. 104: 12-13. In addition, although Linz purportedly employs “a version” of what Geoffrey McGovern and Jonathan Krasno (“MK”) call the “regulatory efficiency” ratio measurement in their unpublished paper “Empirical Overbreadth,”⁴ Linz has never published a peer-reviewed article applying any of the MK measurements, nor has he

³ Linz has admitted his limited understanding of how pages in Google are tagged. Linz Dep. Tr. 85:12-16 (“Do I know the technical machinations associated with the tags, somewhat but not extensively.”). Although Linz knows that a person setting up a website can assign tags to that website, Linz does not know if Google itself tags websites, *id.* at 86:1-6, or if Google verifies that the tags assigned by a person who sets up a website are accurate, *id.* at 86:7-9. Linz’s limited understanding of Google undermines his opinions based on the division of Google hits.

⁴ In his report, Linz incorrectly identified the title of this paper as “Measuring Overbreadth.” Linz Rpt. at 3 ¶ 5.

applied these measurements before in any of his research. *Id.* at 80:25—81:5. He is also not aware of other publications applying the MK ratio measurements to determine whether a statute is overbroad. *Id.* at 82:1-12.

In light of Linz’s lack of expertise on these issues, he is not qualified to offer an expert opinion in this case on the topics for which he has been proffered. *See Conroy v. Vilsack*, 707 F.3d 1163, 1168-1169 (10th Cir. 2013) (“[I]n light of the fact that Dr. Dodd had never researched, written about, or opined on this topic before, it was hardly ‘arbitrary, capricious, whimsical, or manifestly unreasonable’ for the district court to find her unqualified.”) (citing *Atl. Richfield Co. v. Farm Credit Bank of Wichita*, 226 F.3d 1138, 1163–64 (10th Cir. 2000); *Milne v. USA Cycling, Inc.*, 575 F.3d 1120, 1133–34 (10th Cir. 2009); *Ralston*, 275 F.3d at 969–70).

B. Linz’s Opinions Are Unreliable.

1. Linz’s Opinions Do Not Flow From Research Independent of This Litigation.

Where “proffered expert testimony is not based on independent research, the party proffering it must come forward with other objective, verifiable evidence that the testimony is based on ‘scientifically valid principles.’” *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311, 1317-18 (9th Cir. 1995), *cert denied*, 516 U.S. 869 (1995). “[W]hether experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying,” is a factor in assessing the reliability of proffered expert testimony. *In re Unisys Sav. Plan Litig.*, 173 F.3d 145, 166 n.10 (3rd Cir. 1999) (Becker, C.J., dissenting) (quoting *Daubert*, 43 F.3d at 1317).

As discussed above, Linz's opinions do not grow "naturally and directly out of research [he] ha[s] conducted independent of this litigation." Instead, "[h]e ha[s] developed [his] opinions expressly for purposes of testifying" in this case. Therefore, Plaintiffs bear a heightened burden to show that Linz's opinions are reliable. *Daubert*, 43 F.3d at 137-18. They cannot meet this burden because Linz employs unreliable methodologies and fails to reliably consider sufficient data in formulating his opinions.

2. Linz's Division of Google Hits Is Not A Reliable Methodology To Determine the Proportion of Pornography Depicting Children, Teens, and Other Youthful-Looking Individuals.

The primary basis for Linz's opinion that "greater than 99 percent of commercial pornography sites involve adults rather than children," Linz Rpt. at 3 ¶ 11, and that only 2% of pornographic material in the commercial domain depicts individuals who could "reasonably be confused as minors," Linz Rpt. at 6 ¶ 3, is Linz's division of Google hits for the terms "child pron" and "teen pron"⁵ by the hits for "porn." *Id.* at 3 ¶¶ 9-11; 6 ¶¶ 2-3.⁶ *See* Linz Dep. Tr. 95: 9-23; 149:21—150:4. Linz divided the number of Google hits for "child pron" (3,090,000) by the number of hits for "porn" (1,360,000,000), which resulted in the ratio .00227, or 0.2%. Linz Rpt. at 3 ¶ 9. Similarly, Linz divided the hits for "teen pron" (28,600,000) by the hits for "porn" (1,360, 000,000), which resulted in the ratio .0210, or 2.1%. *Id.* at 6 ¶ 2.

⁵ In his report, Linz erroneously states that he used the number of Google hits for "teen porn" in making this division. Linz Rpt. at 3 ¶ 2. In fact, Linz used the number of Google hits for "teen pron" (28,600,000). *See id.* Appendix A at 11. The number of Google hits for "teen porn" was 136,000,000. *Id.* Appendix A at 14.

⁶ Linz did not conduct these Google searches himself. These searches were conducted by an assistant of Jeffrey Douglas, the chair of the board of directors of the Free Speech Coalition. Linz Dep. Tr. 50:10—51:3. Moreover, Linz did not review the accuracy of these search results, *id.* at 53:1-19, nor did he review the contents of the search results, *id.* at 96:4-6. The only thing that Linz considered was the first page of the search results, provided to him by Douglas. Dep. Tr. 51:24—52:19.

These simple divisions obviously do not provide a reliable estimate of the quantity of these types of pornography, nor of other pornography depicting youthful-looking individuals, available online. Linz does not explain why dividing Google hits would provide a reliable estimate of the proportion of child and teen pornography in relation to all pornography. In fact, these Google hits do not tell us the quantity of child and teen pornographic images available online. The hits indicate the number of pages that are *tagged* with these terms, Linz Dep. Tr. 147:14—148:2, but there could be between 0 and thousands of images on each page, *id.* at 93: 1-9. It is also possible – and indeed highly likely, as discussed below – that some pages actually containing “teen porn” or “child porn” are not tagged as such, *id.* at 148:4-6; 89:6-10, and it is also possible that pages are not accurately tagged.⁷

In addition, Linz failed to consider or account for the fact that search results may vary from day to day and from computer to computer. *See* Report of Gail Dines, PhD (“Dines Rpt.”) at 32 n.8 (attached as Linz Exhibit 3).⁸ For example, the Google search pages included in Linz’s report indicate that there were 136,000,000 hits for “teen porn” and 1,360,000,000 for porn. Linz’s Rpt. Appendix A at 14, 16. Linz does not say when these searches were conducted. However, when counsel for the Government conducted some of these searches on May 14, 2013, there were 235,000,000 hits for the term “teen porn”—substantially more than the number Linz reported— and 818,000,000 hits for the term “porn”—substantially fewer than the number Linz reported. *See* Declaration of Héctor G. Bladuell (May 15, 2013) (attached as Linz Exhibit 4). Such a large variation in results makes any attempt to estimate the amount of any type of pornography by using, as

⁷ Linz also failed to analyze whether the “porn” category included images of teen or youthful-looking individuals.

⁸ This report has been redacted to exclude sexually-explicit images.

Linz does, Google hits from only one search conducted on a single day inherently unreliable.

With respect to the Google hits for “child pron,” there are strong reasons to conclude that these hits bear no relationship to the actual amount of child pornography, commercial or otherwise, available online. Linz stated that the term “child pron” was used instead of “child porn” because Jeffrey Douglas, the chair of FSC’s board of directors, told him that “Google will not allow you to search for child porn,” and the term “child pron” is an attempt to find “a related subject.” Linz Dep. Tr. 86:14—87:2.

Nevertheless, Linz acknowledges that not a single child pornography image was located through this Google search. *Id.* at 119:24—120:2. Linz admits that “most of what is captured [in the results list] is material that would not be child pornography at all but primarily reports about child pornography or about child pornographers or about arrests involving child pornography and a variety of other sources.” *Id.* at 84:14-19. Indeed, “Google routinely attempts to search for and eliminate any URLs or other sources of material that could possibly be deemed child pornography.” *Id.* at 85:8-11. Persons setting up sites containing child pornography also have an incentive not to tag their sites as “child porn” because “such a term might be thought of as illegal.” *Id.* at 89:15-21. Moreover, the search for “child pron” would not capture child pornography in peer-to-peer networks, *id.* 96:7-16, which Linz thinks is “the biggest source of child pornography.” Linz Rpt. at 3. There is evidence suggesting that there is child pornography not tagged as such in commercial pornography sites. *See* Report of Janis Wolak, J.D. (“Wolak Rpt.”) at 4 ¶ 6 (attached as Exhibit 5) (describing how websites appearing to host legitimate adult content are portals for child pornography). Child

pornography images can also be transmitted through “chat sites; social networking sites; image hosting and storage sites; commercial temporary and other website; forums, image boards and blogs.” *Id.* at 5 ¶ 9. *See* Linz Dep. Tr. at 100:4-19 (admitting child pornography can be transmitted through these media). Google hits would not include child pornography transmitted through these means. *Id.* at 99:9-16. *See also id.* at 89:6-10 (“child pron” search would not include every site depicting child pornography).

With respect to the Google hits for “teen porn,” Linz’s report misrepresents the actual quantity of these hits. When calculating the ratio of “teen porn” to “porn,” Linz represented that the number of hits for “teen porn” was 28,600,000. Linz Rpt. at 6 ¶ 2. But this is the number of hits for “teen pron.” *See* Linz Rpt. Appendix A at 11. In fact, the number of hits for “teen porn” was 136,000,000, *id.* at 14, more than four times the number of hits for “teen pron.” The difference is substantial. Had Linz used the number of hits for “teen porn” in calculating the ratio, the result would have been 0.10 (10%) instead of 0.02 (2%). In any event, the number of hits for “teen pron” or “teen porn” undoubtedly underreport the actual amount of pornography depicting teens and other youthful-looking individuals available online. *See* Dines Rpt. at 10-13 (explaining that websites including images of youthful-looking individuals are also tagged with terms such as “young,” “schoolgirl,” “college,” “baby sitter,” and “virgin”). “Teen porn” is only a small subset of the pornography depicting youthful-looking individuals.⁹ *See id.* at 6 (distinguishing “youthful looking performers” from the “very youthful”- looking performers commonly found in “teen porn”).

⁹ As noted above, Linz seems to incorrectly assume that §§ 2257 and 2257A are only legitimately applied to child and teen pornography.

Notwithstanding his unsupported opinion that “teen porn” is only 2% of the pornography market, Linz Rpt. at 6 ¶ 2-3, Linz admits that “teen porn” is “extremely popular.” Linz Dep. Tr. 171:6-7. Indeed, data included in Appendix B of Linz’s report confirms that images classified as “teen porn” in Pornhub (16,800) outweigh the number of “MILF” (6,974) and “mature” (2,000) images. Linz Rpt. Appendix B at 23; Linz Dep. Tr. 172:8—173:1.¹⁰

The “primary reason” for Linz’s conclusion on these issues is his simple division of Google hits. Linz did not review the content of “child pron” websites, Linz Dep. Tr. 96:4-6, nor the content of the pages tagged as “teen porn,” *id.* at 92:12-20; 150:2-7. In light of the significant problems associated with using only Google hits to estimate the amount of child and teen porn online, and the fact that Linz has not reviewed the content of these sites, he cannot reliably express an opinion about the proportion of children and teens in online commercial pornography sites. There is simply too great an analytical gap between the data Linz considered and his opinions. *See Joiner*, 522 U.S. at 146. And certainly, drawing conclusions primarily from a simple division of Google hits does not reflect the intellectual rigor that one would expect from an expert in any social science field. *See Kumho*, 526 U.S. at 152. Therefore, Linz’s testimony on these issues should be excluded as unreliable.

3. Linz’s Simple Division of Google Hits Is Not a Reliable Application of The MK “Regulatory Efficiency” Measure, Which Itself Is Not a Reliable Method To Determine Statutory Overbreadth.

¹⁰ Moreover, Dines reported that a search within the three highest-ranked pornsites (pornhub, XNXX, and Redtube) revealed that “teen is the largest single category,” appearing in 27% of the webpages within the three sites, and that the number of hits rose to 34% when “related terms such as ‘young’ and ‘schoolgirl’ ” were included. Dines Rpt. at 13, Table 4. These figures further indicate that Linz’s methodology and opinion are unreliable.

In an apparent attempt to legitimize and provide a theoretical foundation for his simple division of Google hits, Linz stated in his report that he prepared “a version of what McGovern and Krasno call the ‘regulatory efficiency’ measure,” using the Google search “number of hits” discussed above as his data. Linz Rpt. at 3 ¶ 5, 6 ¶ 2. However, this measurement is not a reliable mechanism to determine statutory overbreadth and, in any event, Linz does not have the data necessary to apply this methodology in a reliable manner.

- a. *There is no indication that the MK “regulatory efficiency” measure is a reliable method to determine statutory overbreadth.*

In their paper “Empirical Overbreadth,” McGovern & Krasno¹¹ describe and evaluate three measurements that could be used to estimate the extent to which a statute is overbroad. Geoffrey McGovern & Jonathan Krasno, *Empirical Overbreadth* (Nov. 27, 2007) (unpublished paper) (“MK”) (attached as Linz Exhibit 6). This paper, however, is an “unpublished manuscript.” See *Overbreadth Doctrine*, 122 Harv. L. Rev. 385, 391 n.73 (2008). In addition, the authors state that their analysis is “the first of its kind” in the literature. MK at 4. Moreover, although the paper was posted on the Social Science Research Network¹² on November 27, 2007, it has been downloaded only 87 times. Further confirming the lack of scholarly interest and scrutiny of this paper, there is only one brief citation of this paper in one law review article, which does not comment on the

¹¹ Linz erroneously believed that McGovern and Krasno were “economists.” Linz Dep. Tr. 80:20-24. In fact, they are identified as political scientists in their paper. MK at 1.

¹² The Social Science Research Network (SSRN) is a world-wide collaborative of over 225,000 authors and more than 1.7 million users that is devoted to the rapid worldwide dissemination of social science research. Anyone can post a paper to this website for free as long as the person creates an account.
http://www.ssrn.com/update/general/ssrn_faq.html#what_is

value of these ratios. *See Overbreadth Doctrine, supra*, at 391. In addition, no court has ever even mentioned it. *See Daubert*, 43 F.3d at 1318 (“Despite the many years the controversy has been brewing, no one in the scientific community-except defendant's experts-has deemed these studies worthy of verification, refutation or even comment. It's as if there were a tacit understanding within the scientific community that what's going on here is not science at all, but litigation.”). Linz is not aware of any other academic or author who has applied the MK measurements to determine overbreadth. Linz Dep. Tr. 82:1-12. He also does not know of any peer-reviewed publication that has applied these measurements using Google hits as the data. *Id.* at 81:16-21. Therefore, there is no indication that the MK measurements are a reliable method to determine statutory overbreadth. *See Daubert*, 43 F.3d at 1317 (peer review and publication is one way of showing that “research comports with the dictates of good science.”).

b. Linz does not reliably apply the MK “regulatory efficiency” measure.

In their paper, McGovern & Krasno discuss and evaluate three measurements:

1. Absolute imprecision: This is the total “count of the individual instances of constitutionally protected utterances falling victim to imprecise statutory language.” MK at 5.¹³
2. Regulatory efficiency ratio: This is calculated by dividing (1) the number of protected speech utterances subject to regulation (that is, the number of improperly regulated speech utterances), by (2) the number of speech utterances (protected and unprotected) subject to regulation. MK at 6. The result is the ratio of regulated speech that is protected, and thus improperly burdened by a regulation.¹⁴

¹³ This measurement provides “little guidance in solving the substantiality problem because it lacks a reference point.” MK at 6.

¹⁴ A low number means that few regulated speech utterances are protected, so the vast majority of regulated utterances are “legitimately subject to regulation.” MK at 6.

3. Sweeping overreach ratio: This is calculated by dividing (1) the number of protected speech utterances subject to regulation (same numerator used for “regulatory efficiency”) by (2) the total number of protected speech utterances (whether or not they are subject to the regulation). The result is the ratio of protected speech that is regulated. MK at 5-6.¹⁵

Linz purports to apply the “regulatory efficiency” ratio. In order to calculate the “regulatory efficiency” ratio, one must know: (1) the number of protected speech utterances subject to regulation (that is, the number of improperly regulated utterances), and (2) the number of speech utterances (protected and unprotected) subject to regulation. MK at 6. The first number is the numerator; the second is the denominator. *Id.* at 6 n.28. Linz does not explain how the Google hits that he used for his calculations correspond to the data necessary to apply the “regulatory efficiency” measure reliably. In addition, the numbers Linz uses in the numerator for both of his ratios—the Google hits for “child pron” and “teen pron”—cannot possibly yield an accurate count of the number of improperly regulated speech utterances in this case. Even assuming that the number of Google hits for “child porn” and “teen porn” bear some relationship to the amount of child pornography and pornography depicting youthful-looking individuals (an assumption that is not supported), no one could possibly argue that these types of pornography are the only types of depictions that are properly regulated under §2257.¹⁶ In any event, McGovern & Krasno state that the “regulatory efficiency” ratio “does not measure statutory overbreadth because it lacks a reference to the area of protected

¹⁵ A low number means that few protected speech utterances are subject to regulation, so “the vast majority of protected [speech] utterances are untouched by the regulation.” MK at 6.

¹⁶ For example, even plaintiffs, in their summary judgment filing, suggest that the 2257 requirements validly apply to depictions of sexually explicit conduct using individuals 25 years old or younger. Pls. MSJ Mem. at 10-11 (dkt. no. 144). Of course, Defendant has argued that the universal application of the requirements is necessary to avoid introducing subjectivity into the question of when the requirements do or do not apply.

speech,” *id.* at 6, and that this metric “is inappropriate and erroneous for overbreadth analysis,” *id.* at 10.¹⁷ And they acknowledge that none of their ratio measurements addresses the key substantiality inquiry of an overbreadth analysis, which is an issue for courts to decide according to the specific circumstances of each case. MK at 2, 9 n.37 (stating that an “overbreadth inquiry requires both a predicate metric and a substantiality threshold level” and that the ratio measurements only address the predicate metric); *id.* 5-6, 9 n.37, 15 (“how much overbreadth is too much ... depends on the case and the type of behavior or activities at stake.”). See *United States v. Williams*, 553 U.S. 285, 292 (2008) (in order to prevail on an overbreadth claim, a plaintiff must show that “a statute’s overbreadth [is] substantial, not only in an absolute sense, but also relative to the statute’s plainly legitimate sweep”).

The sample application of these ratio measurements that McGovern & Krasno describe in their article shows the high level of unreliability of Linz’s simple division of Google hits. McGovern and Krasno employed their analysis using extensive campaign finance data gathered at the legislative level for the passage of the Bipartisan Campaign Reform Act of 2002 (“BCRA”) and the *McConnell v. F.E.C.* litigation. MK at 10-11. Indeed, there was “fairly comprehensive data with which to assess statutory overbreadth.” *Id.* at 11. This data consisted of advertisements aired in the 1998 and 2000 campaigns. To employ the measurements, “three pieces of information were needed: 1) the number of pure issue ads ... [that is, the total number of protected speech utterances]; 2) the number of issue ads that would have been affected by BCRA [that is, the total number of speech utterances (protected and unprotected) regulated by the

¹⁷ On the other hand, the authors argue that the “sweeping overreach ratio” is the only metric that measures overbreadth by calculating “a statute’s sweep in relation to potentially threatened protected speech.” MK at 6.

statute]; and 3) the number of pure issue ads treated as electioneering ads [that is, the number of protected speech utterances that were subject to regulation].” MK at 12-13. The researchers used “coders to examine and evaluate *the content of each advertisement* along a variety of criteria.” *Id.* at 12 (emphasis added). After the content of these advertisements was evaluated, the advertisements were divided into the categories needed to apply the MK ratio measurements. MK at 13. This sample application suggests that the MK ratio measurements are only reliably applied “where actual data are available or could be available,” MK at 17, and after the data has been appropriately classified according to its content.

In formulating his opinion, however, Linz did not evaluate comprehensive data, did not evaluate the content of the Google hits provided to him by counsel, and did not classify the data into the categories needed to apply any of the MK ratio measurements. These shortcomings show that Linz’s purported application of the MK “regulatory efficiency” measure is highly unreliable, even if it can be considered an application of this measurement at all. Therefore, the Court should exclude this testimony.

4. Linz’s Opinions Regarding the Production and Transmission of Child Pornography Are Not Based On Sufficient Data Evaluated Reliably.

The Court should also take note that Linz has not recently studied how child pornography is produced and transmitted, and that a great deal of the data he relied on to formulate his opinion is outdated. In 2001, Linz published a chapter about the “current state of research social sciences on child pornography.” Linz Dep. Tr. 35:17—36:2. At the time, Linz was impressed by the great deal of child pornography “transmitted through the postal service.” *Id.* at 36:7-11. Since then, however, Linz has not conducted any studies about how child pornography is distributed, nor has he published peer-reviewed

publications on the distribution of child pornography. *Id.* at 37:25—38:14. Linz also has never conducted any studies about the commercial production of child pornography. *Id.* at 69:14-19.

Rather, Linz relies heavily on statements in a 1992 report by former FBI agent Kenneth Lanning. *See* Linz Rpt. at 2 ¶ 3, 6 ¶ 1. According to Linz, this report stated that child pornography can be divided into two subcategories: commercial and homemade” and that “[t]he commercial child pornography still being distributed in the United States is smuggled in from foreign countries—primarily by pedophiles.” *Id.* at 2-3. Linz relies on Lanning’s report to suggest that “commercial production motivated by profit appears to account for a relatively insignificant proportion of child pornography production in the United States.” *Id.* at 3 ¶ 5. As Wolak stated in her report, however, “[t]his is an outdated pre-Internet description” that does not reflect the global online phenomenon of child pornography today. Wolak Rpt. at 4 ¶ 5. Indeed, a newer version of Lanning’s report, published in 2010, also suggests that Linz’s opinions are outdated and unreliable. In his 2010 report, Lanning states that “the Internet has tended to blur the distinction between commercial and homemade pornography.” Kenneth Lanning, *Child Molesters: A Behavioral Analysis*, Fifth Edition (2010), at 83 (attached as Linz Exhibit 7).

Furthermore, Lanning states that child pornography “now being commercially distributed in the United States is most often sold via the Internet.” *Id.* at 82. Moreover, “there is ... a connection between commercial and homemade child pornography. Often homemade child pornography is sold or traded and winds up on commercial child-pornography websites or in magazines, movies, and videos. These visual images are then reproduced and circulated again and again, sometimes for profit.” *Id.*

Linz also relies on Lanning's 1992 report to suggest that the "vast amount of child pornography involves prepubescent children and is not confused with adult pornography because the perpetrator has no interest in older targets." Linz Rpt. at 6 ¶ 1. Linz also seems to assume that only pedophiles produce and possess child pornography. Both conclusions are unreliable, as current data shows. According to Wolak, research she conducted between 2000-09 found that "at least two thirds of suspects arrested for possession of child pornography had images of children 13 to 17" and that "the percent of arrests involving teen victims increased from 47% in 2000 to 70% in 2009." Wolak Rpt. at 3, ¶¶ 1-2. Lanning's 2010 report also suggests that child pornography images often include older adolescents, and that not everyone arrested for child pornography can be considered a pedophile. For example, Lanning states:

- Pubescent children might be of sexual interest to many individuals who are not diagnostically "pedophiles." Lanning, *supra* at 120.
- Adolescent children seem to be increasingly taking or allowing to be taken sexually explicit images of themselves and then sending or posting them online. *Id.* at 90.
- Children, especially adolescents ... will sometimes use their online access to actively seek out such material and contacts ... Sex offenders targeting children will use and exploit these characteristics and needs. *Id.* at 118.
- Although children from dysfunctional families and families with poor communication might be at higher risk for seduction [by sex offenders], all children are vulnerable. Older children are obviously at greater risk than younger children. Adolescent boys confused over their sexual orientation are at particularly high risk of such contacts. *Id.* at 131.

In his deposition, Linz stated that he was not aware if there was a newer edition of Lanning's report. Linz Dep. Tr. 72: 6-23. Linz's reliance on a more than 20 year-old report, and his failure to look for or find a more recent version, which only takes a few seconds to find on Google, shows just how unreliable his opinions are. Certainly, Linz's

failure to ensure that his research is up to date, and his failure to acknowledge and explain contrary evidence, does not reflect the intellectual rigor that one would expect from an expert in any field. *See Kumho*, 526 U.S. at 152. Accordingly, Linz's proffered testimony regarding the production and transmission of child pornography should be excluded.¹⁸

5. Linz's Opinion About The Quantity Of Private, Non-Commercial Sexually-Explicit Expression Is Unreliable and Irrelevant.

Linz also opines that "many millions of adult Americans exchange sex depictions and images" by various means, such as Facebook, Twitter, and Skype, and that "[i]t is extremely burdensome to noncommercial users who in the course of private lives post on social networks and share images to require reporting mandated by USC 2257 and 2257a." Linz Rpt. 7-8. But this opinion is not based on the application of any reliable methodology. Linz does not cite a study he has conducted on this issue,¹⁹ nor another study that he has reviewed, to opine about the prevalence of this expression. Instead, Linz appears to rely on a list of "organizations" compiled by counsel. *Id.* at 8 (citing Appendix B). But Linz himself has not evaluated the content of the majority of these sites. Linz Dep. Tr. 44, 47:2-4 (reviewed approximately five). Linz has also not verified the numbers provided in Appendix B. *Id.* at 46:22-23; 47: 20-23.²⁰

¹⁸ In his report, Linz also relies on Wolak's research. Linz Rpt. 2-4. Linz deems Wolak's studies "credible," and believes that Wolak and her colleagues have done a "good job" in understanding child pornography. Linz Dep. Tr. 70:12-24. Linz also agrees with some key aspects of Wolak's expert report. Linz Dep. Tr. 128-129. Because Wolak will testify about the production and transmission of child pornography, Linz's testimony on this issue, which does not flow from independent research and was prepared exclusively for litigation, is irrelevant.

¹⁹ Indeed, Linz has not conducted research on this issue. Dep. Tr. 159:11-23.

²⁰ There is no indication that Appendix A and B of Linz's report contain the kind of "facts or data" that "experts in the particular field would rely on ... in forming an opinion on the subject." Fed. R. of Evid. 703

Here, Linz simply assumes that millions of Americans are exchanging “sex depictions and images,” based solely on the fact that there numerous means by which these exchanges can occur. Even assuming that “sex depictions and images” are transmitted through the means Linz describes, it is not clear how many, if any at all, of these images would actually depict “sexually-explicit” conduct within the meaning of the statutes. Dep. Tr. 167:6-7 (“I’ve seen sexual images. To what degree of explicitness, I don’t recall”). The data Linz relies on is plainly insufficient to formulate a reliable opinion on this issue. Therefore, this opinion should be excluded as unreliable and irrelevant.

II. The Proffered Testimony of Michelle Drouin and Mark Zimmerman on the Prevalence of Sexting is Unreliable and Inadmissible

The proffered testimony of Michelle Drouin and Mark Zimmerman on the issue of “sexting” are also plainly unreliable and should be excluded by the court.

A. Background

1. Drouin Report

Drouin is an associate professor of psychology at Indiana University-Purdue University Fort Wayne whose principal area of research is the impact of technology on communication and relationships. Report of Michelle A. Drouin (“Drouin Rpt.”) at 1 (attached as Drouin Ex. 1).²¹ In the present case, she seeks to testify that “approximately” one-third of young adults, ages 18-24, have sent “sexually-explicit visual depictions” via text message, and that she “hold[s] this opinion to a reasonable degree of scientific certainty.” *Id.* at 5-6. Applying this percentage to recent census

²¹ The title of Drouin’s expert report misspells her first name, Drouin Dep. 93:8-13, but the spelling has been corrected in Defendant’s papers associated with this motion.

data, she estimates that approximately 10.2 million young adults ages 18-24 have sent text messages with sexually-explicit visual depictions. *Id.* at 6.

In formulating her estimate, Drouin reviewed six different studies and surveys. Three of these studies, including two conducted by Drouin herself, were limited to certain types of undergraduate students, such as those in introductory psychology classes. *Id.* at 2-4.²² The prevalence of sexting in these studies ranged from 20% to 54%, and according to Drouin, “it would be difficult to generalize” these rates to a national population. *Id.* at 4. Drouin also considered three other surveys with samples that were not limited to undergraduate populations,²³ all of which had prevalence rates near 33%. *Id.* at 5. Despite noting that all six studies used the term “sexting” in various ways, *id.*, Drouin did not define the phrase “sexually explicit,” “sexting,” or any other related term in her report.

2. *Zimmerman Report*

Zimmerman is a professor in the Department of Health Behavior and Health Education at the University of Michigan. Vitae of Marc A. Zimmerman 1 (attached as Zimmerman Ex. 1). His research is primarily focused on adolescent health and development. Zimmerman Dep. 8:14-16. Like Drouin, Zimmerman submitted a report containing estimates about the prevalence of sexting among 18-24 year olds, which was

²² See also Michelle Drouin & Carly Landgraff, *Texting, Sexting, and Attachment in College Students' Romantic Relationships*, 28 *Computers in Human Behavior* 444, 446-47 (2012) (attached as Drouin Ex. 2); Michelle Drouin, Kimberly N. Vogel, Alisen Surbey, & Julie R. Stills, *Let's Talk About Sexting, Baby: Computer-Mediated Sexual Behaviors Among Young Adults*, xxx *Computers in Human Behavior* xxx, 3-5 (forthcoming in print 2013) (attached as Drouin Ex. 3); Christopher J. Ferguson, *Sexting Behaviors Among Young Hispanic Women: Incidence and Association with Other High-Risk Sexual Behaviors*, 82 *Psychiatric Quarterly* 239, 240 (2011) (attached as Drouin Ex. 4).

²³ See Associated Press & MTV, *A Thin Line: 2009 AP-MTV Digital Abuse Study* (2009) (attached as Drouin Ex. 5); The National Campaign to Prevent Teen and Unplanned Pregnancy, *Sex and Tech: Results From a Survey of Teens and Young Adults* (2008) (attached as Drouin Ex. 6); Deborah Gordon-Messer, Jose Arturo Bauermeister, Alison Grodzinski, & Marc Zimmerman, *Sexting Among Young Adults*, 52 *Journal of Adolescent Health* 301, 304-05 (2012) (attached as Drouin Ex. 7).

derived from the results of a survey he had previously administered to internet users ages 18-24 who were selected using a sampling process known as respondent-driven sampling. Expert Report of Marc. A. Zimmerman, Ph.D. (“Zimmerman Rpt.”) 1 (attached as Zimmerman Ex. 2). This study found that 30% of participants had sent a “sexually suggestive nude or nearly nude” image of themselves to another person, and that 41% had received such an image from another person. *Id.* at 2. Zimmerman claims that the results of this survey are representative of internet-users nationwide for three reasons: (1) data obtained from the same sample showed prevalence rates for certain types of substance use that were similar to national prevalence rates found in a study conducted by a third party; (2) Zimmerman and his colleagues weighted the sexting data they obtained from the survey in an effort to account for any differences in the demographics of his sample population and the national population; and (3) the prevalence rate for sexting was similar to that found in two other studies, one of which was limited to undergraduate students in introductory psychology classes. *Id.* at 2.

Applying his prevalence rates to census data, Zimmerman estimated that 9,201,626 young adults ages 18-24 have sent a sext message and that 12,575,560 young adults have received such a message. *Id.* Zimmerman acknowledged that “such extrapolation is sometimes tenuous,” but maintained that his estimates are nevertheless “significant.” *Id.* He added that even if his estimate was off by 50%, a scenario he rejects without further explanation as being “unlikely,” it would still indicate that a large number of young adults have sent and received sexually suggestive messages. *Id.*

3. *Stark Declaration*

In rebuttal to Drouin's and Zimmerman's testimony, Defendant has provided the Expert Declaration of Dr. Philip B. Stark. Expert Decl. dated 4 April 2013 ("Stark Rpt."). Stark is the Chair of the Department of Statistics and a faculty member in the Graduate Program in Computational Science and Engineering at the University of California, Berkeley, and he has "published more than one hundred articles and books and ha[s] served on the editorial board of several scientific journals." *Id.* at 1. After reviewing the expert reports of Drouin and Zimmerman, as well as the studies they cited, Stark concluded that "[t]he numbers put forward by Drs. Drouin and Zimmerman amount to guesses, not scientific estimates. They are not reliable quantitative estimates; they were not derived by following sound statistical practice; and their uncertainties cannot be quantified scientifically, for instance through a margin of error or a confidence interval." *Id.* at 16. Stark further concluded that due to the fact that they were not designed to measure the prevalence of sexting on a national scale, "there is no reliable evidence about the rate of sexting among U.S. young adults in any of the studies Dr. Drouin or Dr. Zimmerman cites, including their own studies." *Id.* at 15.

B. Argument

As discussed below, the proffered testimony of Drouin and Zimmerman fails to meet the admissibility standards required by Rule 702. Neither estimate is relevant to the issue of whether §§ 2257 and 2257A is overbroad, and both estimates are based on unreliable methodologies. Furthermore, Drouin lacks the necessary expertise to estimate the prevalence of a behavior on a nationwide scale. For these reasons, the Court should exclude their testimony.

1. Because They Rely on Studies With Varying Definitions of “Sexting” Much Broader Than the Scope of This case, Drouin’s and Zimmerman’s Estimates Are not Relevant or Helpful to the Court

Neither of the estimates proffered by Drouin and Zimmerman is relevant to the fact-finding required by the Third Circuit, and they are both therefore unhelpful to the unresolved issues in the case. As with any evidence, expert opinions must be relevant in order to be admissible, and “[e]xpert testimony which does not relate to any issue in the case is not relevant and, ergo, non-helpful.” *Daubert*, 509 U.S. at 591 (citation omitted). “[E]ven if an expert’s proposed testimony constitutes scientific knowledge, his or her testimony will be excluded if it is not scientific knowledge *for purposes of the case*.” *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 743 (3d Cir. 1994).

In its opinion reversing this Court’s dismissal of plaintiffs’ overbreadth claim, the Third Circuit stated that plaintiffs should be permitted to provide evidence supporting their contention that §§ 2257 and 2257A regulate purely private conduct, namely “private, noncommercial depictions created and viewed by adults in their homes.” *Free Speech Coalition, Inc. v. Holder*, 677 F.3d 519, 538 (3d Cir. 2012). Clearly, depictions that do not implicate the statutes at all are not relevant to this question. Thus, the scope of any inquiry, for purposes of the overbreadth analysis, is limited to depictions that fall within the purview of §§ 2257 and 2257A.

a. Drouin’s Estimate

For several reasons, Drouin’s estimate regarding the prevalence of young adults in the country sending sexually explicit images does not shed light on the overbreadth inquiry. *First*, Drouin’s report is unhelpful because the phrase “sexually-explicit visual depictions,” though undefined in the report, is not limited to the type of images regulated

by §§ 2257 and 2257A. Both statutes concern depictions of actual or simulated sexually explicit conduct, such as sexual intercourse, bestiality, masturbation, sadistic or masochistic abuse, or lascivious exhibition of the genitals or pubic area of any person. 18 U.S.C. §§ 2257(h)(1), 2256(2)(A). Yet the basis for the phrase “sexually explicit” in Drouin’s report clearly extends beyond this type of conduct. Drouin considered six studies that all defined sexting in various ways, such as “sexually explicit text messages,”²⁴ “naked sexting,”²⁵ “erotic or nude photographs,”²⁶ “sexually suggestive nude or nearly nude photo or video,”²⁷ and “sexually suggestive pictures,” meaning “semi-nude or nude” images.²⁸ See Drouin Dep. 203:9-13 (“Q. So the definition in your expert report of sexually explicit encompasses all of the definitions from the studies you found? A. Yes. It’s not a definition I provided, but the term, yes, encompasses it.”). As Drouin admits, her estimate is “broader” than any of the definitions of sexting that the studies used. See *id.* 233:18-21. Drouin’s own description of the phrase “sexually explicit,” moreover, includes a wide array of conduct not subject to §§ 2257 or 2257A. *Id.* 99:7-9 (“sexually explicit” includes a “man standing in his underwear, if you could see the outline of his genitals”); 99:14-18 (stating that the “main part” about her understanding of “sexually explicit” is that the person depicted “didn’t have to be entirely nude to qualify”); 100:7-8 (“sexually explicit” includes a “sexually-suggestive pose apparently if you are still wearing underwear”); 101:4-6 (“if someone derives sexual pleasure from that image, then it could be sexually explicit”); 102:6-9 (“sexually explicit” includes people “partially clothed,” such as “a girl without her shirt on”).

²⁴ Drouin Ex. 2 at 446.

²⁵ Drouin Ex. 5 at 2.

²⁶ Drouin Ex. 4 at 240.

²⁷ Drouin Ex. 7 at 2.

²⁸ Drouin Ex. 6 at 5.

Given the broad meaning of “sexually explicit” in Drouin’s report, it is impossible to discern the extent to which her estimate includes images regulated by §§ 2257 and 2257A (intercourse, masturbation, bestiality, sadistic or masochistic abuse, or lascivious display of genitals) versus other types of images outside the scope of the statutes (e.g., depictions of women’s breasts or clothed individuals posing in a sexual manner but not displaying genitalia or pubic area). Notably, the only study relied upon by Drouin that attempted to ascertain the prevalence of sexting based on a more delineated definition of “sexually explicit” found that the percentage of participants who had sent the type of images that might be within the purview of §§ 2257 or 2257A was significantly *less* than 33%. *See* Drouin Ex. 3 at 3-5 (finding that fewer than 20% of the participants (undergraduate students in committed, casual, or cheating relationships) had sent a nude image; fewer than 10% had sent an image of a solo sex act, like masturbation; and almost none had sent an image depicting intercourse). But Drouin’s estimate is not so limited, so it is therefore unhelpful to the Court’s fact-finding on the alleged overbreadth of §§ 2257 and 2257A.

Second, Drouin’s report is unhelpful because it gives no information about whether the images referenced in her estimate are the type of noncommercial and private images described by plaintiffs. Drouin does not limit her estimate to images senders have taken of themselves, or other similar intimate depictions. *See* Drouin Rpt. at 5 (estimating the number of young adults who have sent “text messages involving sexually-explicit visual depictions” without indicating any limitation on the identities of individuals who might be depicted). This means that it is impossible to determine the extent to which Drouin’s estimate includes images of celebrities, commercial

pornography, or even minors, compared to the sort of intimate, noncommercial images envisioned by plaintiffs. Even if Drouin's estimate could be so cabined, her own evidence suggests that the prevalence rate for sending such depictions is in all likelihood substantially lower than 33%. *See* Drouin Ex. 5 at 3 (finding that whereas 33% of youth ages 18-24 had "been involved in some type of naked sexting," only 10% of the participants had actually sent a naked image of themselves). Drouin's proffered testimony therefore cannot be used to quantify the prevalence of young adults sending private, noncommercial depictions.

Third, Drouin's expert report is unhelpful because it does not measure the frequency with which young adults send sexually explicit images. As the Third Circuit pointed out, the frequency of allegedly invalid §§ 2257 and 2257A applications is a "significant consideration[]" in the overbreadth analysis. *See Free Speech Coalition*, 677 F.3d at 538 (citing *Gibson v. Mayor and Council of the City of Wilmington*, 355 F.3d 215, 226 (3d Cir. 2004)). Drouin's report, however, contains no information about how often the young adults she estimates have sent sexually explicit messages are engaging in this behavior. Drouin's testimony therefore cannot help the Court determine whether people who have sent a sexually explicit image have done so only once or on multiple occasions. In fact, the only study Drouin did consider that had any measure of frequency suggests that few people engage in sexting on a consistent basis. *See* Drouin Ex. 2 at 446-48 (finding that 6.9% of participants who had ever sent a sexually explicit picture did so more than "occasionally"). But Drouin's report itself is silent on this issue, thereby rendering it irrelevant to the frequency inquiry suggested by the Third Circuit.

In sum, Drouin’s estimate that 33% of young adults have sent sexually explicit images has no bearing on the extent to which §§ 2257 and 2257A regulate “private, noncommercial depictions created and viewed by adults in their homes.” *Free Speech Coalition*, 677 F.3d at 538. Most significantly, Drouin’s estimate is not limited to the type of images regulated by §§ 2257 or 2257A. Her estimate also fails to provide any measurement of the proportion of images sent that might qualify as noncommercial and private in nature, or how frequently such images are sent. Absent this critical information, Drouin’s estimate is unfounded and inherently irrelevant, and thus lacks the “fit” required for its consideration by the Court in assessing plaintiffs’ overbreadth claim.

b. Zimmerman’s Estimate

For the same reasons, Zimmerman’s expert report is also unhelpful to the inquiry into whether §§ 2257 and 2257A are overbroad. Zimmerman’s estimate is based on a study he conducted to obtain the prevalence rate for young adults sending “sexually suggestive nude or nearly nude” images; like Drouin, Zimmerman did not limit his definition to images depicting the type of conduct regulated by §§ 2257 and 2257A. *See* Zimmerman Dep. 169:20-22 (noting that based on definition of “sext” in his study, “we don’t know if it was a picture of themselves in underwear, or if it was a picture of themselves nude, or with somebody else.”), 167:12-14 (definition could include depiction where there is a person in his or her underwear with no genitalia showing), 167:21-24 (noting that study participants were left to construe “sexually suggestive” to include whatever they wanted, such as a man without a shirt on), 168:4-6 (describing his own interpretation of “sexually suggestive” to mean “coy-looking, or picture of you in your underwear, things like that”). Zimmerman’s proffered testimony accordingly does not

contribute relevant information regarding the amount of private exchanges that involve depictions of sexually explicit conduct within the meaning of §§ 2257 and 2257A.

In addition, Zimmerman's estimate suffers from other deficiencies present in Drouin's report. Like Drouin, Zimmerman did not measure the frequency with which individuals send sext messages. Zimmerman Dep. 169:25 – 170:1. Nor does his estimate account for the number of sexually suggestive images sent to multiple recipients ("mass sexts"), Zimmerman Dep. 170:13 – 171:10, meaning that images sent to 10 or 15 people were included in his estimate along with private images exchanged between two people in an intimate relationship. Zimmerman's report thus lacks information necessary to evaluate the scope of §§ 2257 and 2257A.

2. The Methodologies Employed By Drouin and Zimmerman are Unreliable

In addition to being irrelevant to the Court's overbreadth analysis, the proffered expert testimony of Drouin and Zimmerman should be excluded because neither expert employed a reliable methodology. To satisfy Federal Rule of Evidence 702's reliability requirement, a witness's opinions must be based on sufficient information as well as reliable principles and methods that have been properly applied to the evidence in the case. Fed. R. Evid. 702. This standard "applies to all aspects of an expert's testimony: the methodology, the facts underlying the expert's opinion, and the link between the facts and the conclusion." *ZF Meritor*, 696 F.3d at 291 (brackets and citation omitted).

a. Drouin's Methodology

Drouin's proffered testimony falls short of the reliability requirement because it fails to explain the connection between her literature review and her estimate that 33% of young adults nationwide have sent a sexually explicit image. To obtain her estimate,

Drouin considered six sexting studies and surveys that had prevalence rates ranging between 20% and 54%, three of which were limited to certain types of undergraduate students at a particular university. Drouin Dep. 218:19 – 219:4. Drouin arrived at the number 33% upon determining that there was a “convergence of evidence,” a process she describes as follows:

I took all of the studies that I have referenced in my report and looked at them cohesively and made my estimation based on what I felt they said collectively. And there wasn't a set number [of studies needed for there to be a convergence]. I don't know—I don't believe there's a set number. A convergence of evidence is a belief. So a set number tied to that belief would be really difficult for me to imagine existing. In any case, just taking a cohesive look at what exists.

Drouin Dep. 172:16-24. *See also id.* 178:21-25 (“Q. How did you arrive at the figure one-third? A. When you look across these studies, you see that it's about one-third of the sample that has participated in this type of sexting activity, however sexting was defined in those studies.”), 240:21-24 (“I looked at the midpoint. I looked at the averages in other studies, and I considered the ranges, and I made an estimate based on those.”). As Drouin's description suggests, the methodology she used to reach her estimate consisted of little more than her own subjective belief of what the national prevalence of sexting is. *See* Drouin Dep. 180:4-6 (“I thought one-third was a good approximation of the amount of—or the prevalence of this behavior.”); 218:23-25 (“I think 33 percent seemed to me neither to be an underestimation or an overestimation.”).

Such estimates based on the “belief” of experts or on what they “felt [the evidence] said” plainly constitute the sort of *ipse dixit* the Supreme Court has held to be impermissibly unreliable. *See Joiner*, 522 U.S. at 146 (“[N]othing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is

connected to existing data only by the *ipse dixit* of the expert.”). This lack of a sound methodology makes it nearly impossible to assess the accuracy of Drouin’s opinion; indeed, there is no rationale for why her estimate of 33% is any more valid than estimates of 30%, 26%, or even 23%. Nor can Drouin explain how her estimate might change if the data she was examining were different. *See* Drouin Dep. 252:1-16 (“It’s hard for me to know what I would have done [if the three surveys not limited to undergraduate students had found prevalence rates of 28%].”). This type of reasoning, based solely on Drouin’s speculation, falls well short of the reliability required by Rule 702 and should be excluded by the Court. *See Oddi v. Ford Motor Co.*, 234 F.3d 136, 158 (3d Cir. 2000) (excluding opinion testimony where the expert “used little, if any, methodology beyond his own intuition”).

b. Zimmerman’s Methodology

Zimmerman’s methodology also has significant flaws that render his opinions inadmissible. The prevalence estimate Zimmerman obtained from his study, for example, was limited to “young adults [ages 18-24] who used the internet,” but Zimmerman applies this percentage to census data that is not limited to internet users. Zimmerman Rpt. at 2; Zimmerman Dep. 91:11-16 (noting that he “did not correct” his estimate to account for the fact that his study consisted only of internet users). Zimmerman therefore applied a rate he derived from analyzing internet users to a broader population without any explanation or even acknowledgment in his expert report that he was doing so.

In addition, the bases for Zimmerman’s confidence in the representativeness of his sample are quite tenuous. Zimmerman defends his participants as being representative by noting that a study of the same participants found prevalence rates for

their use of certain substances (alcohol, marijuana, cocaine, Ecstasy, and hallucinogens) similar to rates found by a national study using a different sampling method.

Zimmerman Rpt. at 2. But the fact that participants may have used certain substances at rates similar to those found in a national survey says nothing about whether the same sample is representative of young adults nationwide with regards to sexting. *See Stark Rpt.* at 5 (“Even if a method appears to do well in one such comparison, this does not guarantee that it will do well under different circumstances.” (quoting W.G. Cochran, *Sampling Techniques* 10 (John Wiley and Sons, 3d ed. 2002))).

Zimmerman also points out that the sexting prevalence rate from his study is similar to rates found in two other studies on sexting among young adults. One of these studies, however, recruited participants from students in undergraduate psychology classes at a mid-Atlantic university,²⁹ a sampling method Zimmerman himself describes as being very limited in nature. *See Zimmerman Dep.* 63:23-25 (“A very convenient sample, for example, would be, and there’s a lot of criticism in the literature, would be a sample of Psych 100 students . . .”). And although Zimmerman emphasized in his deposition that were he to extrapolate from a sample of undergraduate students in a particular class to a broader population, he would “try to make a logical rationale for . . . why it might be an accurate estimate,” *id.* 65:22-25, he provides no such rationale in his own report for why the prevalence rate for psychology students at one university is valid basis for comparison when trying to estimate a prevalence rate on a national scale.

The second study cited by Zimmerman is an equally unsound basis for comparison. That study submitted questions to individuals who had volunteered to

²⁹ *See* Eric G. Benotsch, Daniel J. Snipes, Aaron M. Martin, & Sheana S. Bull, *Sexting, Substance Use, and Sexual Risk Behavior in Young Adults*, 52 *Journal of Adolescent Health* 307, 308 (2013) (attached as Zimmerman Ex. 4).

participate in online surveys, and it expressly states that “[r]espondents do not constitute a probability sample.” *See* Zimmerman Ex. 5 at 5. The study also states that it stratified and weighted its data in an effort to make it nationally representative, but Zimmerman admits that he does not know what this process entailed. *See* Zimmerman Dep. 215:11 – 216:16; *see also* *ZF Meritor*, 696 F.3d at 293 (finding expert testimony to be unreliable where expert relied on report prepared by a third party, the assumptions for which “were relatively unknown” and were not investigated by the expert). To be sure, Zimmerman acknowledged in his deposition that the studies he selected as a basis for comparison are not the “gold standard,” noting that he made the comparison as a way to ensure that his estimate was “within the ballpark.” Zimmerman Dep. 189:18-22. But ensuring that his estimate is “within the ballpark” is a far weaker measure of confidence than the assertion in his expert report that the results of his survey are “nationally representative of young adults.” Zimmerman Rpt. at 2. In reality, Zimmerman has no reliable method to ensure that his results are nationally representative, and his testimony should accordingly be excluded.

3. Drouin Has No Expertise That Would Qualify Her to Make an Estimate About the Nationwide Prevalence of Sexting

Finally, Drouin’s proffered testimony should be excluded for the additional grounds that she lacks the requisite expertise to make such an estimate about the prevalence of sexting. A witness may be qualified as an expert based on “knowledge, skill, experience, training, or education.” Fed. R. Evid. 702. Nothing about Drouin’s knowledge or experience, however, qualifies her to be an expert in making prevalence

estimates. Drouin, in fact, claims that her expertise is in “young adult sexting,”³⁰ *see* Drouin Dep. 37:9-11, and admits that she has no experience in estimating the nationwide prevalence of behaviors and that making such estimates is not a practice common in her field, *id.* 138:4-6 (“[M]aking estimates about prevalence data is not something that’s typical in social science research.”); 167:18-20 (“I was asked to make an estimate [about the prevalence of sexting]. This is not something that I typically do, make estimates about prevalence.”). Moreover, Drouin concedes that she has never made a prevalence estimate for any behavior other than sexting, *id.* 138:15-17, and has never attempted to estimate the nationwide prevalence of any behavior aside from the estimate contained in her expert report, *id.* 140:1-2 (“I don’t believe that I have made any estimate of national percentages [of sexting].”). Together, Drouin’s unfamiliarity with making prevalence estimates and her concession that making such estimates is outside the scope of her professional field highlight her lack of qualification for making such an estimate in this case. Any general knowledge Drouin may purport to have about sexting as a subject matter, moreover, cannot compensate for her lack of knowledge about *how* to measure the occurrence of that behavior in a national population.

In an apparent effort to bolster the credibility of her estimate, Drouin states that she holds it “to a reasonable degree of scientific certainty,” Drouin Rpt. at 6, but as used by Drouin, this phrase has no meaning. Drouin justifies its use by claiming that she employed a “scientific process” to reach her estimate, *see* Drouin Dep. 222:18 – 223:7, yet she concedes that the phrase “reasonable degree of scientific certainty” is “not a typical phrase in the social sciences,” nor one that she has ever used previously, *id.*

³⁰ Drouin’s purported sexting expertise is also doubtful. *See* Zimmerman Dep. 18:16-17 (“Nobody is really an expert in sexting, actually, [that] is one of the things we found out [in his research].”); 88:4-6 (noting that he had not heard of Drouin prior to this litigation).

244:3-9. Additionally, Drouin admits that she included the phrase in her report because “[i]t seemed to be an appropriate legal term” that was “probably” suggested to her by one of plaintiffs’ attorneys. *Id.* 244:11-19. Equally devoid of meaning in the report is the word “approximately” Drouin uses to hedge her estimate. Drouin concedes that the word has no numerical value as she used it, *id.* 182:7-10, and she describes it as a word that she has never used in a study or one that would ever “be used in the nature of my work usually,” *id.* 245:4-7. Collectively, Drouin’s use of these vague terms not typically employed in her in her field of study reinforce the notion that she lacks the expertise necessary to estimate the prevalence of a behavior on a national scale.

In sum, neither Drouin nor Zimmerman offer opinions that are relevant or reliable for purposes of the overbreadth analysis at issue in this case.

CONCLUSION

For the foregoing reasons, the proffer testimony of Michelle Drouin, Marc Zimmerman, and Daniel Linz should be excluded.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to Local Rule 5.1.2(8)(b), I hereby certify that the foregoing Memorandum has been filed electronically and is available for viewing and downloading from the ECF system. I further certify that the foregoing document was served via ECF on counsel of record for plaintiffs in the above-captioned case.

Dated: May 15, 2013

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